



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,471	01/22/2004	Daniel G. Wing	2705-320	6671
20575 7590 04/16/2007 MARGER JOHNSON & MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204			EXAMINER GEE, JASON KAI YIN	
			ART UNIT 2134	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/16/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/763,471

Applicant(s)

WING, DANIEL G.

Examiner

Jason K. Gee

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/31/2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7-10 and 12-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,7-10 and 12-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This action is response to communication: RCE filed on 01/31/2007.
2. Claims 1-4, 7-10, and 12-29 are currently pending in this application. Claims 1, 10, 17, 20, and 25 are independent claims. Claims 25-29 are new. Claims 5, 6, and 11 are cancelled.
3. Receipt is acknowledged of a request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission, filed on 01/31/2007.

Response to Arguments

4. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 20-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 20-22, the independent claim is directed to receiving a call request and making a determination. However, transferring encrypted media packets only

Art Unit: 2134

occurs when a determination is made that a second gateway is configured for end-to-end secure real-time transport. If this determination is not made, then the system as taught by the claims is only directed to receiving media packets and making a determination, which does not conclude in a useful tangible result.

Claim Rejections - 35 USC § 112

7. The previous 112 rejections have been withdrawn in response to applicant's amendment.

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 28-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

10. As per claims 28-29, claim 28 recites that a third network device is located between the circuit switched network and the packet switched network. However, according to the specification, no third network device is mentioned, and the actions

Art Unit: 2134

performed by the third network device are the actions performed by the first network device.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-4, 7-9, 17-19, 20-22, and 28-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1-4 and 7-9, the independent claim recites "determining whether a remote second gateway that is located on a transfer path for the encrypted media packets that are received..." It is unclear where the encrypted media packets are sent or received, as the claim does not recite sending encrypted media packets. The claim recites encrypting media packets, but does not suggest sending them. This also makes it unclear where the second gateway is located.

As per claim 2, it is unclear how encrypted media packets are decrypted at the first gateway. The independent claim teaches sending that the gateway sends signals to a source endpoint to encrypt media packets. The first gateway never receives the encrypted media packets. Also, if the first gateway does indeed encrypt the media packets, it would not make sense for a system to encrypt the packet and decrypt it immediately after if the encryption was not necessary in the first place.

As per claims 17-19, the independent claim recite "transferring the encrypted media packets." There is insufficient antecedent basis for "the encrypted media packets" in the claims.

Claims 20-22 are rejected using the same basis of arguments used to reject claims 17-19 above.

Also, as per claims 20-22, it is unclear what the intended metes and bounds are for the claims, as the claims are directed to only receiving packets and making a determination.

As per claim 21, the claim recites sending a signal that causes a source endpoint for the media packets to encrypt the media packets. However, it is unclear how this method works, as the independent claim it relies upon already sends encrypted media packets. It would be unclear why an endpoint would need to encrypt the packets again.

As per claims 28-29, it is unclear if the third network device is the same as the first network device, or if they are separate and different units.

As there are many claims that are unclear, the claims will be rejected as best understood by the Examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2134

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, 8, 20, and 21 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Elliot et al. US Patent, Application Publication 2004/0022237 (hereinafter Elliot).

As per claim 1, as best understood by the Examiner; Elliot teaches a method comprising: receiving a call request over a package switched network at a first gateway (Soft Switch Site 104, Figure 1, paragraphs 26 and 28, and throughout the reference) that is located between the packet switched network and a circuit switched network (Figure 1 and throughout the reference, for example claim 15); comparing a phone number included in the call request with entries in a local dial plan located at the first gateway (throughout the reference, such as in paragraphs 34, 511); sending one or more signals from the first gateway to a source endpoint (gateway 108 Figure 1) when the phone number included in the request matches one of the entries in the local dial plan (paragraphs 34, 511), the signals directing the source endpoint to encrypt media packets for the requested call using a protocol for encrypting real-time media (paragraph 28, wherein soft switch site controls the gateway/"source endpoint", and directs gateways to use certain protocols; paragraphs 28, 468, paragraphs 29 and claim 9, wherein gateway controls encryption); determining whether a remote second gateway that is located on a transfer path for the encrypted media packets that are received

Art Unit: 2134

according to the signals and that is located between the circuit switched network and the same or another packet switched network is configured for end-to-end secure transport when the requested call is to be transferred using the circuit switched network (paragraph 35 and throughout the reference; also it is determined if the soft switch site determines that a specific protocol be used, such as an encrypting protocol), establishing an Internet Protocol (IP) link over the circuit switched network extending from the first gateway to the second gateway when the second gateway is configured for end-to-end secure transport (paragraphs 28, 30; secure transport also taught throughout the entire reference, such as with multiple security protocols which may be implemented; also paragraph 1097); transferring the encrypted media packets over the established IP link (throughout the reference, Figure 1; paragraph 1097; also throughout the reference, wherein protocols utilizing encryption and wherein gateways encrypt the media, such as claim 9).

As per claim 3, Elliot teaches the use of multiple protocols. The use of PPP is taught throughout the reference, such as in paragraph 988.

As per claim 4, Elliot teaches establishing the data channel over an ISDN channel of the circuit switched network (such as paragraph 690).

As per claim 8, Elliot teaches including encrypting the media packets only once at the source endpoint and decrypting the media packets only once at a receiving second endpoint (paragraph 1061, claim 9).

Independent claim 20 is rejected using the same basis of arguments used to reject claim 1 above and 17 below.

Claim 21, as best understood by the Examiner, is rejected using the same basis of arguments used to reject claim 1 above.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 2, 9, and 17 are rejected under 35 U.S.C. 103(a) as being anticipated by Elliot as applied above, and in view of applicant's admitted prior art.

As per claim 2, as best understood by the Examiner, Elliott teaches formatting media included in the encrypted media packets into a Packet Switched Telephone network format when the remote second gateway is not configured in that format (throughout the reference, such as in paragraph 687. Encrypting media at a gateway is taught throughout the reference, such as in claim 9. However, at the time of the invention, Elliot does not explicitly teach wherein decrypting the encrypted media packets locally at the first gateway when the remote second gateway is not configured

Art Unit: 2134

for end-to-end secure transport. As can be seen earlier, Elliot does indeed formatting media packets when necessary to adapt to the different formats of sending, such as in paragraphs 681-700). Decrypting media packets when a gateway is not configured for end-to-end secure transport is well known in the art, as taught by the applicant's admitted prior art in the background, such as in paragraph 3 of the publication.

At the time of the invention, it would have been obvious to combine the teachings of Elliot with the well known art as admitted by the applicant. When a gateway is not configured for end-to-end encryption, and if the media packets are encrypted, it would be obvious to decrypt the data, so as to be able to transfer the data to the gateway. One of ordinary skill in the art would have been motivated to perform such an addition so as to provide flexibility in systems/gateways that cannot handle end-to-end secure transport.

As per claim 9, Elliot teaches encrypting media packets throughout the reference, and can also be seen in the rejection for the previous claims. The use of RTP is taught also throughout the reference, such as in paragraphs 1044-1048. Establishing PPP over ISDN, and sending encrypted IP media packets over the PPP connection is taught throughout the reference, and rejected using the same basis of arguments used to reject claims 3 and 4. However, the use of SRTP is not explicitly taught by Elliot, although secure communications utilizing RTP is taught. SRTP is well known in the art, and is taught in the applicant's admitted prior art, such as in paragraph 2 of the publication. At the time of the invention, it would have been obvious to combine the teachings of Elliot with the well known art as admitted by the applicant. One of ordinary

skill in the art would have been motivated to perform such an addition as SRTP is a standard used for encrypting real-time media, in an IP network, as taught in paragraph 2 of the background.

As per independent claim 17, Elliot teaches receiving a call request over a packet switched network in a first gateway that is located between the packet switched network and a circuit switched network (as seen in the rejection for claim 1); determining whether a second on-path gateway includes a capability for end-to-end secure real-time transport in response to receiving the call request, and transferring the encrypted media packets over an IP connection that traverses the circuit switched network and extends between the first and second gateways when the second gateway includes the capability for end-to-end secure real time transport (as seen in the rejection for claim 1, wherein the gateway sends encrypted media packets to designated gateways as decided by the soft switches). However, at the time of the invention, Elliot does not explicitly teach converting the received encrypted media packets to a PSTN format for transmission across a different connection that also traverses the circuit switched network when the second gateway does not include the capability for end-to-end secure real time transport. However, this is taught by the applicant's admitted art, as seen in paragraph 3 of the background, and also rejected using the same basis of arguments used to reject claim 2 above.

15. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot as applied above, and in view of Bulfer et al. US Patent No. 5,392,357 (hereinafter Bulfer).

As per claim 7, Elliot teaches the use of encryption and decryption by the use of gateways throughout the reference, such as in paragraph 1061. However, method of using encrypted keys and the exchange of keys is not explicitly taught by Elliot. Claim 7 claims the basics of key exchange, which is well known in the art. Key exchange is taught in Bulfer in col. 12 line 50 to col. 14 line 14. The training mentioned in these passages deal with key exchange, which is taught in col. 8 lines 26-44.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the teachings of Bulfer with Elliot. Elliot and Bulfer are analogous art, as they both deal with secure telecommunications. One of ordinary skill in the art would have been motivated to perform secure key exchange would be to increase security of the system, as sending encrypted keys is much more secure than sending keys in the clear, which is not usually performed in the art.

16. Claims 10, 13, 22, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot as applied above, and in view of Salovuori US Patent Application Publication 2002/0196781 (hereinafter Salovuori).

As per independent claim 10, Elliot teaches a processor configured to establish an Internet Protocol link for transferring encrypted IP packet payloads over a circuit switched network (as seen throughout Elliot, and as can be seen in the rejection for claim 1 above), the IP link extending across the circuit switched network and between

Art Unit: 2134

the network processing device and a remote gateway that is located between a packet switched network and the same or another circuit switched network (throughout the reference, and as rejected in claim 1 above). However, at the time of the invention, Elliot does not explicitly teach forwarding packets having an encrypted IP packet payload over the IP link without decrypting the encrypted IP packet payload. However, this is taught in Salovuori in paragraph 28.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include transferring the packets without decrypting the payload. One of ordinary skill in the art would have been motivated to perform such an addition so as to not decrypt and re-encrypt the data, which degrades the quality of speech. This is taught in Salovuori in paragraph 28: "Neither does speech speech-encoded in the TETRA system have to be decoded before the speech frames are placed into the H.323 frames, which means that transcoding, which degrades the quality of speech, is avoided."

As per claim 13, Elliot teaches a memory containing a dial plan for identifying phone numbers that can be transferred between the packet switched network and the circuit switched network (paragraphs 34, 511). Not decrypting the encrypted IP packet payload is taught using the combination of Salovuori, as can be seen in paragraph 28.

As per claim 22, voice data is taught throughout Elliot, such as in paragraph 29. Encrypted voice and data is also taught throughout the reference, as can be seen in the reference and the rejections above. Sendign data without intermediary decryption is taught in Salovuori in paragraph 28.

As per claim 25, Elliot teaches a system comprising: first and second network devices, at least one of the first and second network devices located between a packet switched network and a circuit switched network (Figure 1, and also as seen in the rejection for claim 1, with gateways 108 and 110); the first network device to receive encrypted media packets from a source endpoint (wherein gateway sites receive encrypted data from media gateways; paragraphs 29, 463, claim 9); and the first network device to transfer the encrypted media packets over a connection extending through the circuit switched network and extending to the second network device for forwarding to a destination endpoint (Figure 1, throughout the reference, and as can be seen in the rejection for claim 1). However, at the time of the invention Elliot does not explicitly teach wherein the second network device does not decrypt the data, and wherein any intermediary devices located in the call path does not decrypt the data. This is taught by Salovuori though, such as in paragraph 28, and as seen in the previous art rejections above.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include transferring the packets without decryption. One of ordinary skill in the art would have been motivated to perform such an addition so as to not decrypt and re-encrypt the data, which degrades the quality of speech. This is taught in Salovuori in paragraph 28: "Neither does speech speech-encoded in the TETRA system have to be decoded before the speech frames are placed into the H.323 frames, which means that transcoding, which degrades the quality of speech, is avoided."

As per claim 26, the transferring of video data is well known in the art. Elliot teaches the use of video data throughout the reference, such as in paragraphs 679, 684, 685, etc.

As per claim 27, Elliot teaches wherein the first and second network devices are gateways located between the circuit switched network and the packet switched network (Figure 1, and also as can be seen in the rejection for claim 1).

17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot and Salovuori as applied above, and further in view of obviousness over Saadat et al. US Patent Application Publication 2005/0125357 (hereinafter Saadat)..

As per claim 12, Elliot teaches the use of Codecs for compression, such as in 942, 944, and 1048. Switching compression algorithms is also taught in paragraph 1048. However, Elliot and Salovuori does not explicitly teach compressing a non-decrypted data at a higher compression rate using a second codec. However, compressing data at different rates due to encryption or decryption is taught in Saadat in paragraph 80.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to compress data using different codecs. One of ordinary skill in the art would have been motivated to perform such an addition allow more efficiency when storing or transporting material by compressing materials at different compression rates. This is taught in paragraphs 11 and 12, where it teaches that the new invention would

Art Unit: 2134

overcome the old art by providing a cheaper and better way to store video without lowering video quality.

18. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot and Salovuori as applied above, and further in view of Bruce Schneier's *Applied Cryptography* (2nd Edition).

As per claim 14, Elliot and Salovuori does not explicitly teach receiving a first key from a first endpoint, encrypting the first key using the shared key and sending the encrypted first key to the ingress device. However, this is taught in Schneier on page 48. (Memory for storing a key is inherent as it uses the key).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the use of Key Exchange in a secure hybrid system of circuit and packet switched networks. One of ordinary skill in the art would have been motivated to perform such an addition to allow easy security use. This is taught by Schneier on page 48, where it cites "In some practical implementations, both Alice's and Bob's signed public keys will be available on a database. This makes the key-exchange protocol even easier, and Alice can send a secure message to Bob even if he has never heard of her."

Art Unit: 2134

19. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot Salovuori, and Schneier as applied above, and further in view of being obvious over Bulfer et al US Patent No. 5,392,357 (hereinafter Bulfer).

As per claim 15, the Elliot combination does not explicitly teach the limitations of claim 15, but Bulfer teaches this in col. 12 line 50 to col. 14 line 14. The training mentioned in these passages deal with key exchange, which is taught in col. 8 lines 26-44. Shared keys are used to decrypt keys, as taught by Schneier, and it would have been obvious to one of ordinary skill in the art to decrypt more than one key using the shared key. As can be seen, Bulfer teaches a plurality of keys, and it would be useful to have multiple keys for more security.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include key exchange in a circuit switched network. One of ordinary skill in the art would have been motivated to perform such an addition to allow flexibility so that different parties may engage in secure communications with one another. This is taught in '357 in col. 1 lines 30-38, where it cites "present security techniques have several limitations, including the general requirement that both the calling and called parties that desire to engage in a secure communication must have compatible security equipment that can send and receive encrypted signals using common handshaking protocols and encryption algorithms. If this is not the case, secure communications are normally not possible." It goes on in col. 2 lines 26-30 to teach "The invention also permits secure communication between parties using security devices with different handshaking protocols and encryption algorithms."

20. Claims 16 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot and Salovuori as applied above, and in view of applicant's admitted prior art.

Claim 16 is rejected using the same basis of arguments used to reject claim 9 above. At the time of the invention, it would have been obvious to combine the teachings of Elliot and Salovuori with the well known art as admitted by the applicant. One of ordinary skill in the art would have been motivated to perform such an addition as SRTP is a standard used for encrypting real-time media, in an IP network, as taught in paragraph 2 of the background.

The limitations of claim 28 are rejected using the same basis of arguments used to reject claim 1 and 2 above, wherein the first, second, and third network devices are utilizations of the gateways, media gateways, and soft-switches as taught throughout Elliot. The applicant's prior art teaches the decryption of packetized information into a PSTN format when the third network device is not capable of the EE-SRTP protocol.

As per claim 29, the use of a dial plan stored locally is rejected using the same basis of arguments used to reject claim 1 above. The dial plan taught by Elliot is used to confirm which gateways and users are authorized and what the systems are capable of.

21. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot and applicant's admitted prior art as applied above, and in view of Bulfer.

As per claim 18, Elliot teaches throughout the reference that both gateways authenticate call requests, such as in paragraphs 26-30, wherein softswitch sites control gateway communication, which include making, accepting, and terminating calls, and utilizing security protocols. PPP sessions are taught throughout the reference, such as in paragraphs 988. However, at the time of the invention, exchanging encryption keys with the second gateway is not explicitly taught by Elliot. This is taught by Bulfer though, such as in col. 12 line 50 to col. 14 line 14. The training mentioned in these passages deal with key exchange, which is taught in col. 8 lines 26-44. Also, the rejection for claim 7 can be applied as well.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the teachings of Bulfer with Elliot. Elliot and Bulfer are analogous art, as they both deal with secure telecommunications. One of ordinary skill in the art would have been motivated to perform secure key exchange would be to increase security of the system, as sending encrypted keys is much more secure than sending keys in the clear, which is not usually performed in the art.

22. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot, Bulfer, and applicant's admitted prior art as applied above, and further in view of Schneier.

As per claim 19, the Elliot combination teaches the sending of encryption keys to second gateways. However, the Elliot combination does not explicitly teach the use of encrypting encryption keys. The encryption of encryption keys are well known in the art, and can be seen by Schneier on pages 47-48.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the use of Key Exchange in a secure hybrid system of circuit and packet switched networks. One of ordinary skill in the art would have been motivated to perform such an addition to allow easy security use. This is taught by Schneier on page 48, where it cites "In some practical implementations, both Alice's and Bob's signed public keys will be available on a database. This makes the key-exchange protocol even easier, and Alice can send a secure message to Bob even if he has never heard of her."

23. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot, Salovuori, and the applicant's admitted prior art as applied above, and further in view of Hluchyj US Patent No. 6,381,238 (hereinafter Hluchyj).

As per claim 23, the Elliot combination does not explicitly teach all the details of the limitations in this claim. However, claim 23 recites the basics of tunneling packets, which involves the stripping of a certain headers while retaining the headers of another packet, and generating new headers to replace the stripped headers. The use of SRTP is already well known in the art, as established by the Applicant's admitted background,

and would be obvious to be made into the tunneled packet, as can be seen in the rejections above using the background. Tunneling is also very well known in the art, in which packet headers are added to packets to package them so they can be sent with the right protocols. Tunneling is taught in Elliot starting in paragraph 1062. Also, packet adaptation is taught in Hluchyj, as seen in col. 5 lines 49-55.

At the time of the invention, it would have been obvious to combine the teachings of the Elliot combination with Hluchyj. One of ordinary skill in the art would have been motivated to perform such an addition to allow flexibility of a packet switch fabric while reducing the cost and complexity of the system (col. 2 lines 5-11).

24. Claim 24 is rejected under 35 U.S.C. 103(a) as being anticipated by Elliot and Salovuori as applied above, and further in view Seshadri et al. US Patent Application Publication 2004/0068481 (hereinafter Seshadri), and further in view of Bulfer.

As per claim 24, the Elliot combination teaches a network processing device, comprising: a processor configured to establish a connection between two endpoints that extends over an Internet Protocol (IP) network and a circuit switched network (Figure 3b, wherein a processor is inherent, as can be seen in the rejection for claim 20), the processor forwarding packets having an encrypted IP packet payload between the two endpoints without decrypting the encrypted IP packet payload when transferred between the IP network and circuit switched network (Figure 3b, col. 4 lines 1-9; col. 5 line 42 to col. 6 line 23; also see rejection for claim 20).

However, at the time of the invention, '391 does not explicitly teach receiving an out-of-band communication that provides a secret that is shared. However, this is taught in Seshadri '481 in paragraph 169.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include the teachings of Seshadri. One of ordinary skill in the art would have been motivated to perform such an addition to provide more security, as out-of-band channels are well known in the art to provide secure transactions between parties.

Claim 24 also claims a method of key exchange and the use of a gateway. All the limitations of the key exchanging process and the gateway are taught in 'Bulfer, in col. 12 line 50 to col 14. line 15, as can be seen in the rejections above that apply Bulfer.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include the encrypting/decrypting key exchange in a circuit switched/packet-switch network. One of ordinary skill in the art would have been motivated to perform such an addition to allow flexibility so that different parties may engage in secure communications with one another. This is taught in Bulfer in col. 1 lines 30-38, where it cites "present security techniques have several limitations, including the general requirement that both the calling and called parties that desire to engage in a secure communication must have compatible security equipment that can send and receive encrypted signals using common handshaking protocols and encryption algorithms. If this is not the case, secure communications are normally not possible." It goes on in col. 2 lines 26-30 to teach "The invention also permits secure communication between

Art Unit: 2134

parties using security devices with different handshaking protocols and encryption algorithms."

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason K. Gee whose telephone number is (571) 272-6431. The examiner can normally be reached on M-F, 7:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Gee
Patent Examiner
Technology Center 2134
04/05/2007


KAMBIZ ZAND
SUPERVISORY PATENT EXAMINER